

# Introduction to Cloud Computing

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# 5 Critical Facts You Must Know Before Moving To The Cloud

In this report you'll learn about **5 very important facts to consider before you move to the cloud**. These include:

1. What cloud computing is.
2. The pros AND cons of this new technology.
3. The various types of cloud computing options you have (there are more than just one).
4. Answers to important, frequently asked questions you need to know the answer to.
5. What questions you need to ask your IT pro before letting them "sell" you on moving all or part of your network and applications to the cloud.

At the end of this report there is an invitation for you to request a [Free Cloud Readiness Assessment](#) to determine if cloud computing is right for your business. It lets you take a hard look at the functionality and costs to make a good decision about this new technology.

## WHAT IS CLOUD COMPUTING?

Wikipedia recently defined cloud computing as "The use and access of multiple server-based computational resources via a digital network (WAN, Internet connection using the World Wide Web, etc.)."

### But what the heck does *that* mean?

The easiest way to not only understand what cloud computing is, but also gain insight into why it's gaining in popularity, is to compare it to the evolution of public utilities. For example, let's look at the evolution of electricity.

Back in the industrial age, factories had to produce their own power in order to run machines that produced the hard goods they manufactured. Be those goods textiles or railroad spikes, using

machines gave these companies enormous competitive advantages by producing more goods with fewer workers and in less time. For many years, the production of power was every bit as important to their company's success as the skill of their workers and quality of their products.

### Unfortunately, this put factories into **TWO**

**businesses:** the business of producing their goods and the business of producing power. Then the concept of delivering power (electricity) as a utility was introduced by Thomas Edison when he developed a commercial-grade replacement for gas lighting and heating using centrally generated and distributed electricity. From there, as they say, the rest was history.

The concept of electric current being generated in central power plants and delivered to factories as a utility caught on fast. This meant manufacturers no longer had to be in the business of producing their own power. **In fact, in a very short period of time, it became a competitive necessity for factories to take advantage of the lower-cost option being offered by public utilities.** Almost overnight, thousands of steam engines and electric generators were rendered obsolete and left to rust next to the factories they once powered.

What made this possible was a series of inventions and scientific breakthroughs – but what drove the demand was pure economics. Utility companies were able to leverage economies of scale that single manufacturing plants simply couldn't match in output or in price. In fact, the price of power dropped so significantly that it quickly became affordable not only for factories but for every single household in the country.

Today, we are witnessing a similar transformation following a similar course. The only difference is that instead of cheap and plentiful electricity, advancements in technology and Internet connectivity are driving down the costs of computing power. With cloud computing, businesses can pay for “computing power” like a utility without having the exorbitant costs of installing, hosting and supporting it.

There's a good chance that MOST of the software applications you use every day are now SaaS applications, or “Software as a service.” In other words, you don't install them on your server or PC – you simply access them for free or on a “pay-as-you-go” model for only the licenses, space and features you use. In fact, you are probably already experiencing the benefits of cloud computing in some way but haven't realized it. Below are a

number of cloud computing applications you might be using:

- Gmail, Hotmail or other free e-mail accounts
- Facebook
- NetSuite, Salesforce
- Constant Contact, ExactTarget, AWeber or other e-mail broadcasting services
- Zoomerang, SurveyMonkey and other survey tools
- LinkedIn
- Twitter
- Google is a massive, free cloud application – the power required to search billions of web sites and content in seconds and deliver the relevant results to your screen FAR EXCEEDS the capacity of your computing device.

If you think about it, almost every single application you use today can be (or already is) being put “in the cloud,” where you can access it and pay for it via your browser for a monthly fee or utility pricing. You don't purchase and install software, but instead access it via an Internet browser.

## WHAT ABOUT OFFICE 365 AND GOOGLE APPS?

Office 365 and Google Apps are perfect examples of the cloud computing trend; for an inexpensive monthly fee, you can get full access and use of Office applications that used to cost a few hundred dollars to purchase. And since these apps are being powered by the cloud provider, you don't need an expensive desktop with lots of power to use them – just a simple Internet connection will do on a laptop, desktop or tablet.

Of course, these aren't great options for all businesses. Google Apps doesn't (currently) integrate with many line-of-business applications, which presents a deal breaker for using this service. For example, if you like using Microsoft's Excel or

Word to pull reports or create documents from your line-of-business application, you might not be able to do that with Google Apps.

Microsoft's Office 365 also has other limitations that may make it a poor choice for a business, including the fact that you get limited help-desk support. If something goes wrong, there isn't a customer service help desk you can call for support or assistance. But again, it's a perfect example of where business is going with cloud computing.

## PROS AND CONS OF MOVING TO THE CLOUD

As you read this section, keep in mind there is no "perfect" solution. All options – be it an in-house network or a cloud solution – have both upsides and downsides. And the options have to be determined on a case-by-case scenario before you can come to a conclusion on which option will work for you. (Warning: Do not let a cloud expert tell you there is only "one way" of doing something.) Some companies end up with a **hybrid solution** where some of their applications are in the cloud and some are still hosted and maintained from an in-house server. We'll discuss more of this in a later section; however, here are the general pros and cons of cloud computing:

### Pros Of Cloud Computing:

**Never have to upgrade your systems ever again.** If your computer network is in desperate need of an upgrade and you hate the idea of shelling out thousands of dollars on hardware, software and technical support to install the new network, then cloud computing could be the right fit for you. In addition, you may be able to extend the life of your current office PCs since most of your computing resources are powered in the cloud.

**Lowered IT costs.** This is probably the single most compelling reason why companies choose to move their network (all or in part) to the cloud. Not only

do you save money on software licenses, but also on hardware (servers and workstations) as well as IT support and upgrades. In fact, we save our clients an average of 30% when we move some or part of their network functionality to the cloud. So if you hate constantly writing big, fat checks for IT upgrades, you'll really want to look into cloud computing. Included in this report are examples of how we've done this for other clients and what the savings have been.

**Ability to access your desktop and/or applications from anywhere and any device.** If you travel a lot, have remote workers or prefer to use an iPad while traveling and a laptop at your house, cloud computing will give you the ability to work from any of these devices.

**Disaster recovery and backup are automated.** The server in your office is extremely vulnerable to a number of threats, including viruses, human error, hardware failure, software corruption and, of course, physical damage due to a fire, flood or other natural disaster. If your server were in the cloud and (God forbid) your office was reduced to a pile of rubble, you could purchase a new laptop and be back up and running within the same day. This would NOT be the case if you had a traditional network and were using tape drives, CDs, USB drives or other physical storage devices to back up your system.

Plus, like a public utility, cloud platforms are far more robust and secure than your average business network, because they can utilize economies of scale to invest heavily into security, redundancy and failover systems, making them far less likely to go down.

**It's faster, cheaper and easier to set up new employees.** If you have a seasonal workforce or a lot of turnover, cloud computing will not only lower your costs of setting up new accounts, but it will make it infinitely faster.

**You use it without having to “own” it.** More specifically, you don’t own the *responsibility* of having to install, update and maintain the infrastructure. Think of it as similar to living in a condo where someone else takes care of the building maintenance, repairing the roof and mowing the lawn, but you still have the only key to your section of the building and use of all the facilities. This is particularly attractive for companies who are new or expanding, but don’t want the heavy outlay of cash for purchasing and supporting an expensive computer network.

**It’s a “greener” technology that will save on power and your electric bill.** For some smaller companies, the power savings will be too small to measure. However, for larger companies with multiple servers who are cooling a hot server room and keep their servers running 24/7/365, the savings are considerable.

#### **Cons Of Cloud Computing:**

**The Internet going down.** While you can mitigate this risk by using a commercial-grade Internet connection and maintaining a second backup connection, there is a chance that you’ll lose Internet connectivity, making it impossible to work.

**Data security.** Many people don’t feel comfortable having their data in some off-site location. This is a valid concern, and before you choose any cloud provider, you need to find out more information about where they are storing your data, how it’s encrypted, who has access and how you can get it back. You’ll find more information on this under “What To Look For When Hiring A Cloud Integrator” later on in this document.

**Compliance Issues.** There are a number of laws and regulations, such as Gramm-Leach-Bliley, Sarbanes-Oxley and HIPAA, that require companies to control and protect their data and certify that they have knowledge of and control over who can access the

data, who sees it and how and where it is stored. In a public cloud environment, this can be a problem. Many cloud providers won’t tell you specifically where your data is stored.

Most cloud providers have SAS 70 certifications, which require them to be able to describe exactly what is happening in their environment, how and where the data comes in, what the provider does with it and what controls are in place over the access to and processing of the data; but it’s YOUR neck on the line if the data is compromised, so it’s important that you ask for some type of validation that they are meeting the various compliance regulations on an ongoing basis.

## **DIFFERENT TYPES OF CLOUD SOLUTIONS EXPLAINED**

**Pure Cloud:** This is where all your applications and data are put on the other side of the firewall (in the cloud) and accessed through various devices (laptops, desktops, iPads, phones) via the Internet.

**Hybrid Cloud:** Although “pure” cloud computing has valid applications, for many it’s downright scary. And in some cases it is NOT the smartest move due to compliance issues, security restrictions or performance issues. A hybrid cloud enables you to put certain pieces of existing IT infrastructure (say, storage and e-mail) in the cloud, and the remainder of the IT infrastructure stays on-premise. This gives you the ability to enjoy the cost savings and benefits of cloud computing where it makes the most sense without risking your entire environment.

**Point Solutions:** Another option would be simply to put certain applications, like SharePoint or Microsoft Exchange, in the cloud while keeping everything else on-site. Since e-mail is usually a critical application that everyone needs and wants access to on the road and on various devices (iPad, smart phone, etc.), often this is a great way to get advanced features of Microsoft Exchange without the cost of

installing and supporting your own in-house Exchange server.

**Public Cloud Vs. Private Cloud:** A public cloud is a service that anyone can tap into with a network connection and a credit card. They are shared infrastructures that allow you to pay-as-you-go and are managed through a self-service web portal. Private clouds are essentially self-built infrastructures that mimic public cloud services, but are on-premise. Private clouds are often the choice of companies that want the benefits of cloud computing, but don't want their data held in a public environment.

## FAQS ABOUT SECURITY, WHERE YOUR DATA IS HELD AND INTERNET CONNECTIVITY

**Question: What if my Internet connection goes down for an extended period of time?**

**Our Answer:** While this is a valid concern, we overcome it in the following way for our clients in the cloud. We highly recommend that you have a second inexpensive failover internet connection with a different service provider. The reason for this is if your primary internet connection goes down, you still have a second internet connection.

**Question: What happens if the Internet slows to the point where it's difficult to work productively?**

**Our Answer:** Bandwidth has become so abundant and inexpensive that this is typically not an issue. However in those cases, where it is an issue, we resolve this by keeping a synchronized copy of your data on your on-site server as well as in the cloud. Here's how this works: This technology synchronizes documents between cloud servers and local servers in your office. So instead of getting rid of your old server, we keep it on-site and maintain an up-to-date synched copy of your files, folders and documents on it. If the Internet goes down or slows to a grind, you simply open a generic folder on your PC and the system will automatically know to pull

the documents from the fastest location (be it the cloud server or the local one). Once a file is modified, it syncs in seconds so you don't have to worry about having multiple versions of the same document. Using this process, you get the benefits of cloud with a backup solution to keep you up and running during slow periods or complete Internet outages.

**Question: What about security? Isn't there a big risk of someone accessing my data if it's in the cloud?**

**Our Answer:** In many cases, cloud computing is a MORE secure way of accessing and storing data. Just because your server is on-site doesn't make it more secure; in fact, most small to medium businesses can't justify the cost of securing their network the way a cloud provider can. And most security breaches occur due to human error; one of your employees downloads a file that contains a virus, they don't use secure passwords or they simply e-mail confidential information out to people who shouldn't see it. Other security breaches occur in on-site networks because the company didn't properly maintain its own in-house network with security updates, software patches and up-to-date antivirus software. That's a FAR more common way networks get compromised vs. a cloud provider getting hacked.

**Question: What if YOU go out of business? How do I get my data back?**

**Our Answer:** We give every client network documentation that clearly outlines where their data is and how they could get it back in the event of an emergency. This includes emergency contact numbers, detailed information on how to access your data and infrastructure, a copy of our insurance policy and information regarding your backups.

**Question: Do I have to purchase new hardware (servers, workstations) to move to the cloud?**

**Our Answer:** No! That's one of the selling points of cloud computing. It allows you to use older

workstations, laptops and servers because the computing power is in the cloud. Not only does that allow you to keep and use hardware longer, but it allows you to buy cheaper workstations and laptops because you don't need the expensive computing power required in the past.

## WHAT TO LOOK FOR WHEN HIRING A CLOUD INTEGRATOR

A "cloud integrator" is a fancy name for an IT consultant who helps you set up and integrate the various software and solutions into a cloud service specific to your business. But buyer beware! The cloud is brand-new technology and you don't want just anyone setting you up on this.

Unfortunately, the computer repair and consulting industry (along with many others) has its own share of incompetent or unethical people who will try to take advantage of trusting clients who simply do not have the ability to determine whether or not they know what they are doing. Sometimes this is out of greed for your money; more often it's simply because they don't have the skills and competency to do the job right **but won't tell you that up front because they want to make the sale.**

From misleading information, unqualified technicians and poor management, to terrible customer service, we've seen it all...and we know they exist in abundance because we have had a number of customers come to us to clean up the disasters they have caused.

Automotive repair shops, electricians, plumbers, lawyers, realtors, dentists, doctors, accountants, etc., are heavily regulated to protect the consumer from receiving substandard work or getting ripped off. However, the computer industry is still highly unregulated and there are few laws in existence to protect the consumer – **which is why it's so important for you to really research the company or person you are considering, to make sure they**

**have the experience to set up, migrate and support your network to the cloud.**

Anyone who can hang out a shingle can promote themselves as a cloud expert. Even if they are honestly *trying* to do a good job for you, their inexperience can cost you dearly in your network's speed and performance or in lost or corrupt data files. To that end, here are 12 questions you should ask your IT person before letting them migrate your network to the cloud.

## CRITICAL QUESTIONS TO ASK YOUR IT COMPANY OR COMPUTER CONSULTANT BEFORE LETTING THEM MOVE YOUR NETWORK TO THE CLOUD (OR TOUCH YOUR NETWORK!)

**Q1: How many clients have you provided cloud services for to date and can you provide references?**

**Our Answer:** You don't want someone practicing on your network. At a minimum, make sure they have at least 5 years of experience and clients already using this cloud platform.

**Q2: How quickly do you guarantee to have a technician working on an outage or other problem?**

**Our Answer:** Anyone you pay to support your network should give you a written SLA (service level agreement) that outlines exactly how IT issues get resolved and in what time frame. I would also request that they reveal what their average resolution time has been with current clients. They should also answer their phones live from 8:00 a.m. to 5:00 p.m. and provide you with an emergency after-hours number you may call if a problem arises, including weekends.

If you cannot access your network because the Internet is down or due to some other problem, you can't be waiting around for hours for someone to

call you back OR (more importantly) start working on resolving the issue. Make sure you get this in writing; often cheaper or less experienced consultants won't have this or will try and convince you it's not important or that they can't do this. Don't buy that excuse! They are in the business of providing IT support so they should have some guarantees or standards around this that they share with you.

### **Q3: What's your plan for transitioning our network to the cloud to minimize problems and downtime?**

**Our Answer:** We run a simultaneous cloud environment during the transition and don't "turn off" the old network until everyone is 100% confident that everything has been transitioned and is working effortlessly. You don't want someone to switch overnight without setting up a test environment first.

### **Q4. Do you provide a no-risk trial of our network in the cloud to test the proof of concept BEFORE we commit to a long-term contract?**

**Our Answer:** We provide all of our clients a free 30-day cloud "test drive" using your servers, applications and data so you can see, firsthand, what it will be like for you and your staff to move your servers to the cloud. While this isn't a full migration, it will give you a true feel for what cloud computing will be like BEFORE you commit to a long-term contract. There is no charge for this and no obligation to buy anything. At the end of the 30 days, you'll know whether or not this is a right fit for you, or if you would prefer to keep your current on-site network.

### **Q5: Do you take the time to explain what you are doing and answer our questions in terms that we can understand (not geek speak), or do you come across as arrogant and make us feel stupid for asking simple questions?**

**Our Answer:** Our technicians are trained to have the "heart of a teacher" and will take time to

answer your questions and explain everything in simple terms. Our client feedback is important and we do ask our clients to take a survey at the end of every ticket resolution.

### **Q6: How will our data be secured and backed up?**

**Our Answer:** If they tell you that your data will be stored in their own co-lo in the back of their office, what happens if THEY get destroyed by a fire, flood or other disaster? What are they doing to secure the office and access? Are they backing it up somewhere else? Make sure they are SAS 70-certified and have a failover plan in place to ensure continuous service in the event that their location goes down. If they are building on another platform, you still want to find out where your data is and how it's being backed up.

### **Q7: Do you have adequate errors and omissions insurance as well as workers' compensation insurance to protect US?**

**Our Answer:** Here's something to consider: if THEY cause a problem with your network that causes you to be down for hours or days or to lose data, who's responsible? Here's another question to consider: if one of their technicians gets hurt at your office, who's paying? In this litigious society we live in, you better make darn sure that whomever you hire is adequately insured with both errors and omissions insurance AND workers' compensation – and don't be shy about asking to see their latest insurance policies!

### **Q8: Is it standard procedure for you to provide us with written network documentation detailing what software licenses we own, our critical passwords, user information, hardware inventory, etc., or are you the only person with the "keys to the kingdom"?**

**Our Answer:** All clients receive this at no additional cost. We also perform an update 1 to 2 times a year on this material and make sure certain key people from your organization have this information and

know how to use it, giving you complete control over your network.

Side note: You should NEVER allow an IT person to have that much control over you and your company. If you get the sneaking suspicion that your current IT person is keeping this under their control as a means of job security, get rid of them (and we can help to make sure you don't suffer ANY ill effects). This is downright unethical and dangerous to your organization, so don't tolerate it!

**Q9: Do you have other technicians on staff who are familiar with our network in case our regular technician goes on vacation or gets sick?**

**Our Answer:** Yes; and since we keep detailed network documentation (basically a blueprint of your computer network) and updates on every client's account, any of our technicians can pick up where another left off.

**Q10: Do you INSIST on doing periodic test restores of our backups to make sure the data is not corrupt and could be restored in the event of a disaster?**

**Our Answer:** We perform a quarterly "fire drill" and perform a test restore from backup for our clients to make sure their data CAN be recovered in the event of an emergency. If there's a problem, we notify our clients immediately and start working to resolve it the same day. After all, the WORST time to "test" a backup is when you desperately need it.

**Q11: Do your technicians maintain current vendor certifications and participate in ongoing training – or are they learning on our dime?**

**Our Answer:** Our technicians are required to keep the most up-to-date vendor certifications in all the software we support. Plus, our hiring process is so stringent that over 90% of the technicians who apply don't make it through. (Guess who's hiring them?)

**Q12: Are you familiar with (and can you support) our unique applications?**

**Our Answer:** We own the problems with all line-of-business applications for our clients. That doesn't mean we can fix faulty software – but we WILL be the liaison between you and your vendor to resolve problems you are having and make sure these applications work smoothly for you instead of pointing fingers and putting you in the middle.

## A FINAL WORD...

I hope you have found this guide helpful in shedding some light on cloud computing. As I stated in the opening of this report, my purpose in providing this information was to help you make an informed decision and avoid getting burned by the many incompetent firms offering these services.

**Below you will find information on how to request a [FREE Cloud Readiness Assessment](#). This is, of course, provided for free, with no obligations and no expectations on our part.** I want to be clear that this is NOT a bait-and-switch offer or a trick to get you to buy something. My reputation for running an honest and trustworthy business is something I hold very dear. I would never jeopardize that in any way. So why are we offering something like this for free?

Two reasons:

1. We are simply offering this service as a risk-free "get to know us" offer to people we haven't had the pleasure of doing business with. Again, our goal is to allow you to make an informed and confident decision; offering this service is one way we can help you better evaluate our services.
2. This will allow us to determine if we even CAN help you. Obviously we can't help everyone, and cloud computing might not be a good fit for your particular circumstances. Conducting this Assessment enables us to perform a small service for you and give you a risk-free way of



determining whether or not we're the right company for you without risking your money.

Looking forward to your call!  
David Kakish, President, InhouseCIO  
877-361-3499

## FREE CLOUD READINESS ASSESSMENT

We would like to offer you, as a prospective customer, a FREE Cloud Readiness Assessment and cost analysis. This Assessment has three parts:

**Cost Analysis And Inventory:** Our first step is to look at what your current network consists of in hardware, licenses, data and applications. Next, we compile an IT cost assessment to reveal your total spend on IT, including Internet connectivity, support and other fees. Most companies have never really looked at their entire IT costs this way, and often this report alone is an eye-opener. Why do we do this? Because our goal is to find ways we can significantly lower those costs while simplifying and improving your workflow.

**Health Check:** We will perform a 27 point audit of your entire network to look for potential problems, security loopholes, spyware and other hidden problems you might not know about. Often we find faulty backups, out-of-date antivirus software, faulty firewalls and missing security patches that, if left unaddressed, could end up costing you MORE in new hardware, support, business downtime and data loss.

**Cloud Readiness:** After we've looked at the above areas, we then look at how you and your employees work and share information and see what applications or processes we can safely move to the cloud to improve ease of use and, of course, to lower costs.

When the assessment is complete, we'll give you a Cloud Action Plan that shows you how we can save you money and resolve a number of work-arounds and problems you may have been experiencing to date. Even if you decide not to hire us, having a third party conduct this type of assessment will give you some good information on saving money and the security and health of your computer network.

## SIGN UP FOR A FREE CLOUD READINESS ASSESSMENT

Go to [www.InhouseCIO.com/Assessment](http://www.InhouseCIO.com/Assessment)

OR

Email us at [info@InhouseCIO.com](mailto:info@InhouseCIO.com) and put Cloud Assessment in the subject line

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We're like your own  
Fortune 500 IT department,  
but at an affordable price.

